What is claimed is:

- 1. A metal complex which has a functional group capable of forming a covalent bond with an amino group of an N-terminal amino acid residue of protein or peptide or with a carboxyl group of a C-terminal amino acid residue of protein or peptide.
- 2. The metal complex according to claim 1, which has a ligand with the functional group capable of forming the covalent bond with the amino group of the N-terminal amino acid residue of protein or peptide or with the carboxyl group of the C-terminal amino acid residue of protein or peptide.
- 3. The metal complex according to claim 1, wherein a metal element thereof is selected from transition metals and typical metals.
- 4. The metal complex according to claim 1, wherein a coordination number thereof is 2, 3, 4, 5 or 6.
- 5. The metal complex according to claim 1, wherein a ligand thereof is a monodentate ligand or a polydentate ligand.
- 6. The metal complex according to claim 1, wherein the covalent bond formed between the amino group of the N-terminal amino acid residue of protein or peptide or the carboxyl group of the C-terminal amino acid residue of protein or peptide and the functional group is not cleaved in a stage of ionization in mass spectrometry.
- 7. The metal complex according to claim 1, wherein the functional group capable of forming the covalent bond with the

amino group of the N-terminal amino acid residue of protein or peptide is a functional group capable of forming the covalent bond through nucleophilic reaction with the amino group.

- 8. The metal complex according to claim 1, wherein the functional group capable of forming the covalent bond with the amino group of the N-terminal amino acid residue of protein or peptide is $-CO-OR_1$, where R_1 represents H or an active ester-forming group.
- 9. The metal complex according to claim 1, which is represented by the following general formula (I):

$$(L_2) \mathsf{mM}(L_1) \tag{I}$$

wherein M represents a transition metal; L_1 represents a ligand having a substituent: $-CO-OR_1$ (where R_1 represents H or an active ester-forming group) or $-R_2-CO-OR_1$ (where R_2 represents an arylene group or an alkylene group, R_1 represents H or an active ester-forming group); L_2 represents a ligand; m is a number of L_2 , indicating 0, 1, 2, 3, 4 or 5.

10. The metal complex according to claim 1, which is represented by the following general formula (II):

$$\begin{array}{c|c}
 & O \\
 & N \\$$

wherein M represents a transition metal; and R_1 represents H or an active ester-forming group represented by any of the following formula:

- 11. The metal complex according to claim 1, wherein the functional group capable of forming the covalent bond with the carboxyl group of the C-terminal amino acid residue of protein or peptide is a functional group capable of forming the covalent bond through nucleophilic reaction with the carboxyl group.
- 12. The metal complex according to 1, wherein the functional group capable of forming the covalent bond with the carboxyl group of the C-terminal amino acid residue of protein

or peptide is -NH2 or -NHNH2.

13. The metal complex as claimed in claim 1, which is represented by the following general formula (III):

$$(L_2) mM(L_3)$$
 (III)

wherein M represents a transition metal; L_3 represents a ligand having a substituent: $-NH_2$, $-NHNH_2$, $-R_2-NH_2$ or $-R_2-NHNH_2$ (where R_2 represents an arylene group or an alkylene group); L_2 represents a ligand; m is a number of L_2 , indicating 0, 1, 2, 3, 4 or 5.

- 14. A reagent for determining amino acid sequence of protein or peptide, which comprises the metal complex according to claim 1.
- 15. A method for determining amino acid sequence of protein or peptide, which comprises using the metal complex according to claim 1.
- 16. A method for determining amino acid sequence of protein or peptide, which comprises

reacting the metal complex according to claim 1 with a protein or peptide (A) of which the amino acid sequence is to be determined, to form a metal complex derivative (B) where the covalent bond of the functional group of the metal complex with the amino group of the N-terminal amino acid residue of the protein or peptide (A) or with the carboxyl group of the C-terminal amino acid residue of protein or peptide is formed, and

analyzing the metal complex derivative (B) through mass spectrometry.